HAZELNUTKIT Real Time PCR

Real Time PCR Hazelnut DNA Detection Kit

Test system for the qualitative detection of hazelnut DNA in food products by PCR Real time

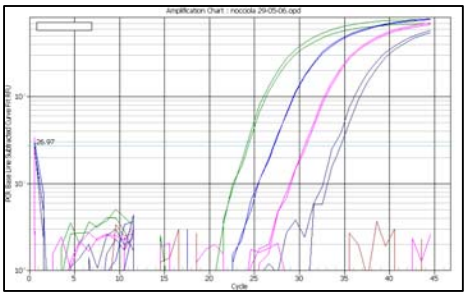
Product code: IC-02-1031 (50 tests) / IC-02-1033 (25 tests)

Brief description

HazelnutKit Real Time PCR provides reagents for the qualitative detection of hazelnut DNA in several food products, fresh and processed. The PCR Real Time kit amplifies a DNA fragment that is present solely in hazelnut. The amplified DNA segment is detected by hybridisation with a probe labelled with fluorescent dyes. The increase in fluorescence is continuously measured in a PCR real-time detection instrument.

Hazelnut is considered allergenic food and it is explicitly mentioned in the European Food Labelling Directive.

HazelnutKit Real Time PCR is an useful tool to monitor the food allergens to ensure compliance with food labelling (2003/89/EC Directive) and to improve consumer protection.



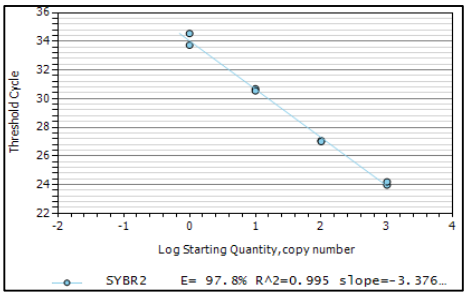


Figure 1: Test sensitivity for *Hazelnutkit DNA Detection kit*.

1000 genome copies *Corylus avellana*
100 genome copies *Corylus avellana*
10 genome copies *Corylus avellana*
1 genome copy *Corylus avellana*

Technical features

Number of tests	25/50 target DNA specific reactions
Kit components	Mix *Test Hazelnut* – Mix Test Inhibition – DNA positive control – sterile H_2O DN*ase* free
Specificity	the kit has been tested with DNA extracted from both raw material and processed food. The specificity of the system has been validated with several other species normally used in food production (see the Panel below). No cross-reactivity effects have been revealed.
Limit of Detection	1 copy of hazelnut haploid genome, equal to roughly 0.48 pg of *Corylus avellana* DNA (see Fig.1).
Detection	Probe labelled with fluorescent dyes Taqman ® - FAM

Specificity control group tested negative for cross-reactivity:

Almond (*Prunus dulcis*)
Apple *(Malus domestica)*
Apricot (*Prunus armeniaca*)
Barley (*Hordeum vulgare*)
Bean (*Phaseolus vulgaris*)
Blackberry (*Rubus fruticosus*)
Black cherry (*Prunus cerasus*)
Bovine (*Bos taurus*)
Brazil nut (*Bertholletia excelsa*)
Broad bean (*Vicia faba*)
Buckwheat (*Fagopyrum esculentum*)
Carrot (*Daucus carota*)
Cashew nut *(Anacardium occidentale*)
Cherry (*Prunus avium*)
Chestnut (*Castanea sativa*)
Chicken (*Gallus gallus*)
Celery (*Apium graveolens*)
Coconut (*Cocos nucifera*)
Cod (*Merluccius capensis*)
Currant (*Rubus vulgare*)
Giuggiola (*Zizyphus jujuba*)
Green Pea (*Pisum sativum*)
Lemon (*Citrus limon*)
Lentils (*Lens esculenta*)
Macadamia nut (*Macadamia integrifoglia*)
Maize (*Zea mays*)
Man (*Homo sapiens*)
Mussel (*Mytilus chilensis*)
Mile (*Panicum miliaceum*)
Mushroom (*Agaricus bisporus*)
Mustard (*Brassica alba*)
Nutmeg (*Myristica fragrans*)
Oat (*Avena sativa*)
Orange (*Citrus sinensis*)
Parsley (*Petroselinum crispum*)
Peach (*Prunus persica*)
Peanut (*Arachis hypogaea*)
Pear (*Pyrus communis*)
Pecan nut (*Carya illinoensis*)
Peppermint *(Mentha piperita)*
Pine nut (*Pinus pinea*)
Pistachio (*Pistacia vera*)
Plum (*Prunus domestica*)
Potato (*Solanum tuberosum*)
Prickly pear (*Opuntia ficus indica*)
Pumpkin (*Cucurbita pepo*)
Raspberry (*Rubus idaeus*)
Rice (*Oryza sativa*)
Rye (*Secale cereale*)
Sesame (*Sesamum indicum*)
Shrimp (*Peneaus monodon*)
Soya (*Glycine max*)
Spelt (*Triticum dicoccum*)
Triticale (*Triticosecale*)
Walnut (*Juglans regia*)
Wheat (*Triticum aestivum*)
White Lupin (*Lupinus albus*)
Yeast (*Saccharomyes cervisiae*)

4LAB Diagnostics
Via Pallavicino 38 – 26845 Codogno (LO) – Italy - Phone: +39 (0) 375 200130 Fax: +39 (0) 375 200678 - Website: www.4labdiagnostics.com